

CLAIMS

1. An aircraft tire comprising at least one pair of parallel annular beads, at least one carcass ply wrapped around said beads, folded high modulus belt reinforcement disposed over said carcass ply in a crown area of said tire, tread disposed over said belt reinforcement and sidewalls disposed between said tread and said beads, wherein the improvement comprises a layer of low modulus reinforcement material wrapped around the folded edges of said high modulus belt reinforcement.
2. The aircraft tire of claim 1 wherein said high modulus belt reinforcement comprises high modulus reinforcement cords encapsulated in rubber to form a substantially two dimensional belt ply having length and width, and said layer of low modulus reinforcement comprises low modulus reinforcement cords or filaments encapsulated in rubber to form a substantially two dimensional belt edge ply strip having length and width.
3. The aircraft tire of claim 2 wherein said high modulus reinforcement is a belt ply folded into a folded belt structure wherein the belt ply has a width about twice the width of the folded belt structure.
4. The aircraft tire of claim 3 wherein said belt edge strip has substantially the same width as said belt ply and is folded completely around said folded belt structure.
5. The aircraft tire of claim 3 wherein said belt edge strip has a width about five-eighths to seven eighths of the width of said belt ply and is placed radially below said folded belt and the edges of said belt edge strip are folded radially above said folded belt structure.
6. The aircraft tire of claim 3 wherein said belt edge strip comprises split belt edge layers having a combined width of about five-eighths to seven eighths of the width of said belt ply wherein one edge of each split layer is disposed radially below said folded belt and the distal end of each split layer is folded radially above the folded belt structure substantially completely covering the radially outer surface of said folded belt structure.

7. The aircraft tire of claim 2 wherein said high modulus reinforcement cords are aramid.
8. The aircraft tire of claim 2 wherein said low modulus reinforcement cords are nylon.
9. The aircraft tire of claim 2 wherein said high modulus reinforcement cords are disposed in a tire construction at an angle of ± 15 to $\pm 25^\circ$ with respect to the equatorial plane (EP) of the tire and said low modulus reinforcement cords are aligned in the same general direction as said high modulus reinforcement cords and are disposed at an angle of ± 15 to $\pm 29^\circ$ with respect to the EP of the tire.

10. A method of building an aircraft tire comprising the steps of

- (a) reducing the diameter of a belt building drum below that required for building a belt package for a tire,
- (b) applying a belt edge strip ply to said belt building drum,
- (c) expanding the diameter of said belt building drum to a diameter which is still less than the diameter required for building a belt package for a tire,
- (d) applying a belt ply over said belt edge strip ply on said belt building drum,
- (e) expanding the diameter of said belt building drum to the diameter required for building a belt package for a tire,
- (f) applying cut belts over said belt ply,
- (g) folding the belt ply and the belt edge strip ply over said cut belts,
- (h) expanding a tire carcass on a tire building drum to the belt package, and
- (i) adding tread and sidewalls and any other external components required to complete the construction.

11. A method of building a belt package for a pneumatic tire comprising the sequential steps of

- (a) reducing the diameter of a belt building drum below that required for building a belt package for a tire,
- (b) applying a belt edge strip ply to said belt building drum,
- (c) expanding the diameter of said belt building drum to a diameter which is still less than the diameter required for building a belt package for a tire,
- (d) applying a belt ply over said belt edge strip ply on said belt building drum,
- (e) expanding the diameter of said belt building drum to the diameter required for building a tire,

- (f) applying cut belts over said belt ply,
- (g) folding the belt ply and the belt edge strip ply over said cut belts.